

10. (amended) The method of Claim 18 wherein step (a1) comprises:

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- (1) pre-distorting a plurality of said waveforms; and
 - (2) transmitting each of said plurality of said waveforms from a different one of a plurality of transducer elements in a single transmit event.

11. The method of Claim 18 wherein:

step (a1) comprises transmitting first and second ultrasonic pulses, the second ultrasonic pulse associated with a substantially opposite polarity than the first ultrasonic pulse, the first and second ultrasonic pulses pre-distorted as a function of a non-linear characteristic; and

step (b) comprises:

(b1) receiving first and second ultrasonic receive pulses, each receive pulse associated with a respective one of the transmit pulses, and each receive pulse comprising a respective fundamental receive component and a respective harmonic receive component; and

(b2) combining at least two of the receive pulses to form a composite harmonic signal.

12. (amended) The method of Claim 18 wherein:

step (a1) comprises transmitting a set of ultrasonic transmit pulses into a region, each transmit pulse comprising respective first and second transmit components, the first transmit components associated with selected ones of the transmit pulses modulated at a fundamental ultrasonic frequency and being out of phase by a phase difference, the second transmit components associated with said selected ones of the transmit pulses being substantially in phase, at least one of said components pre-distorted as a function of a non-linear characteristic; and

step (b) comprises:

(b1) receiving a plurality of ultrasonic receive pulses from the region, each receive pulse associated with a respective one of the transmit pulses, and each receive pulse comprising a respective fundamental receive component and a respective harmonic receive component; and

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(b2) combining at least two of the receive pulses to form a composite signal, said phase difference effective to cause the fundamental receive components to destructively interfere to a different extent than the harmonic receive components in the summing step.

13. (amended) The method of Claim 12 wherein step (a1) comprises transmitting a set of unipolar ultrasonic transmit pulses.

14. (amended) The method of Claim 18 wherein step (a1) comprises:

(1) generating a set of fundamental waveforms associated with a first apodization, first delays and first pulse shapes;

(2) generating a set of second harmonic waveforms associated with the first delays, a second pulse shape proportional to the first pulse shape, and a second apodization proportional to the first apodization; and

(3) combining the set of fundamental waveforms and the second of second harmonic waveforms.

15. (amended) The method of Claim 18 wherein step (a1) comprises generating a set of pre-distorted waveforms, each of said pre-distorted waveforms comprising a fundamental and a harmonic component, said set of pre-distorted waveforms associated with a different apodization for said fundamental component than for said harmonic component.

16. (amended) The method of Claim 18 wherein step (a1) comprises adding a second harmonic component.

17. (amended) The method of Claim 18 wherein step (a1) comprises transmitting the waveform comprising a pulse spatially defined by a first zero value adjacent to a first non-zero value of said pulse and a successive second zero value adjacent to a second non-zero value of said pulse, wherein a peak amplitude of said pulse is a first distance from said first zero value, said first distance displaced from half a distance between said first and second zero values by at least 1% of said distance between said first and second zero values.